What is claimed:-

1. A method for depositing an epitaxial layer on a substrate wafer of semiconductor material in a deposition apparatus, comprising
a placing of the substrate wafer on a susceptor of the deposition apparatus, which is surrounded, separated by a gap, from a preheat ring and is held by a supporting shaft;
a determining of an excentricity between an axis perpendicularly through the center of the preheat ring and an axis perpendicularly through the center of the susceptor;
a passing of deposition gas over the substrate wafer along a flow direction pointing from a gas inlet to a gas outlet;
a passing of purge gas along a lower side of the preheat ring and a lower side of the susceptor;
a rotating of the supporting shaft about an axis of rotation with a frequency;
which comprises
a displacing of the supporting shaft from a starting position in which its axis of rotation is arranged along the axis perpendicularly through the center of the preheat ring to an end position and back to the starting position with the frequency of the rotating of the supporting shaft, the displacement path from the starting position to the end position being dependent on the excentricity.

2. The method as claimed in claim 1, wherein the displacement path from the starting position to the end position is described by a vector whose magnitude is the magnitude of the excentricity and whose direction is opposite to the direction of the excentricity.

3. The method as claimed in claim 2, wherein the displacement path from the starting position to the end position is described by a resultant vector of a vector sum with the vector and a further vector as summands, the magnitude of the further vector being dependent on a wedge character of the substrate wafer and the direction of the further vector having the flow direction of the deposition gas.

4. The method as claimed in any of claims 1 to 3, wherein the supporting shaft is displaced by means of at least one actuator.